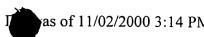
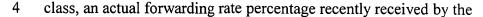
## **CLAIMS**

1	Λ.	A method	comprising
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- 2 receiving data packets at a communications node,
- associating each of the received data packets with one of a
  set of different service classes,
- 5 transmitting packets corresponding to the received data
- 6 packets to recipients, and
- 7 controlling the order in which packets are transmitted based
- 8 on the transmission rate and the service class of the packets.
- 1 2. The method of claim 1 in which the transmitted packets
- 2 comprise physical layer packets.
- 1 3. The method of claim 1 in which the rates of transmission
- 2 are controlled based on a time-division multiplexing algorithm.
- 1 4. The method of claim 1 in which the node comprises a radio
- 2 node of a communications protocol.
- 1 5. The method of claim 4 in which the communications
- 2 protocol comprises HDR.
- 1 6. The method of claim 1 in which the different classes of
- 2 service conform to a differentiated services architecture.



- 1 7. The method of claim 6 in which the differentiated services
- 2 architecture comprises DiffServ.
- 1 8. The method of claim 1 in which the service classes
- 2 comprise at least one expedited forwarding class and at least one
- 3 assured forwarding class.
- 1 9. The method of claim 1 also including receiving a user-
- 2 defined minimum average forwarding percentage rate for at least
- 3 one of the different service classes.
- 1 10. The method of claim 9 in which the percentage comprises a
- 2 percentage of the total bandwidth of a link on which the packets
- 3 are transmitted.
- 1 11. The method of claim 1 in which the transmission rate is
- 2 determined by the recipients.
- 1 12. The method of claim 11 in which the transmission rates are
- 2 sent by the recipients using a feedback channel to the node.
- 1 13. The method of claim 1 in which the rates of transmission of
- 2 the packets are controlled by two-level scheduling including a
- 3 class level in which rates are determined among the classes of
- 4 service and a recipient level in which rates are determined among
- 5 the recipients associated with each class.
- 1 14. The method of claim 13 in which the recipient level uses
- 2 the Qualcomm alogorithm.
- 1 15. The method of claim 13 in which the class level scheduling
- 2 is based on at least one of the following for each of the classes: a
- 3 configured minimum average forwarding rate percentage for the



- 5 class, and a channel quality for the recipients that belong to the
- 6 class and are selected to receive service by the recipient level
- 7 scheduling.
- 1 16. The method of claim 13 in which the class level scheduling
- 2 is done over a predetermined length window of time slots.
- 1 17. The method of claim 13 in which the class level scheduling
- 2 includes a weighted round robin scheduling algorithm in which the
- 3 weights correspond to channel quality of the recipients belonging
- 4 to the respective classes.
- 1 18. The method of claim 13 in which the class level scheduling
- 2 is based in part on a planned recipient level selection within each
- 3 class.
- 1 19. The method of claim 18 in which the class level scheduling
- 2 is based on a metric scaled by different scaling factors for different
- 3 service classes.

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- 1 20. The method of claim 19 in which the scaling factors for all
- 2 service classes are adaptively adjusted to meet the MAFRP for the
- 3 service classes.

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- 1 21. The method of claim 18 in which the class level scheduling
- 2 is based on a metric which is adaptively adjusted to meet the
- 3 MAFRP for the service classes.



- 1 22. The method of claim 13 in which the class level scheduling
- 2 selects a class from among a subset of the classes.

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- The members of the subset of classes are determined by 1 2 pre-assigned schedule times.
- 1 24. The method of claim 13 in which the recipient level
- 2 scheduling selects a recipient from among a subset of the
- 3 recipients.
- The members of the subset of recipients are determined by 1
- pre-assigned schedule times.

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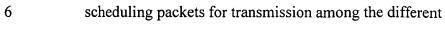
## Apparatus comprising

- 2 a communications node configured to receive data packets,
- 3 associate each of the received data packets with one of a set of
- different service classes, transmit packets corresponding to the 4
- 5 received data packets to recipients, and control the order in which
- 6 packets are transmitted based on the transmission rate and the
- service class of the packets.

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## A method comprising

- receiving from a network operator values representing 2
- 3 minimum average forwarding rate percentages for each of more
- than one distinct classes of service associated with transmission of 4
- packets from a radio node of a network to recipients, and 5



7 classes based on the received values.

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